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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,269	03/23/2004	Mika Sippola	116598-00113	1945

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BLANK ROME LLP  
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WASHINGTON, DC 20037

EXAMINER
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PIZARRO CRESPO, MARCOS D

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/806,269

Applicant(s)

SIPPOLA, MIKA

Examiner

Marcos D. Pizarro-Crespo

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 3-9, 13-20 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10-12 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-23 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Application/Control Number: 10/806,269 (Final Rejection)  
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Attorney's Docket Number: 116598-00113

Filing Date: 3/23/2004

Claimed Foreign Priority Dates: 10/23/2002 (Continuation of PCT/EP02/11839)  
10/23/2001 (FI 20012052)

Applicant(s): Sippola

Examiner: Marcos D. Pizarro-Crespo

### **DETAILED ACTION**

This Office action responds to the amendment filed on 2/15/2006.

#### ***Acknowledgment***

1. The amendment filed on 2/15/2006, responding to the Office action mailed on 11/15/2005, has been entered. The present Office action is made with all the suggested amendments being fully considered. Accordingly, pending in this Office action are claims 1-23.

#### ***Election/Restrictions***

2. The applicant elected species 8 without traverse in the communication filed 9/29/2005. Newly added claim 23, however, reads on non-elected species 6 and 7 as listed in the restriction requirement mailed on 8/10/2005. Accordingly, claims 23 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

#### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (US 6225688).

6. Regarding claim 1, Kim shows all aspects of the instant invention including a multilayer circuit comprising a flexible sheet **310** of insulating material having two sides, wherein:

- Conductive sections are attached to both of the two sides **620/624** (see, e.g., fig. 12)
- The flexible sheet is folded along folding lines (see, e.g., fig. 15)
- The folding lines divide the sheet into consecutive segments
- Folding the sheet forms a multilayer structure having conductor layers, formed by the conductive sections, and insulator layers, formed by the flexible sheet, stacked above each other (see, e.g., fig. 15)
- The conductive sections are interconnected to form an electric circuit (see, e.g., fig. 15)

- At least two consecutive sections of the electric circuit that must be insulated from each other are disposed on different sides of the sheet (see, e.g., figs. 12 and 15)
7. Regarding claim 2, Kim shows that consecutive sections of electric circuit that must be insulated from each other are insulated by one single ply of the flexible sheet (see, e.g., fig. 15).
8. Regarding claim 10, Kim shows the circuit including magnetic and/or electric and/or electronic components **626** (see, e.g., fig. 15).
9. Regarding claim 11, Kim shows the components are inside the multilayer structure (see, e.g., fig. 15).
10. Regarding claim 12, Kim shows the circuit including cavity and apertures (see, e.g., figs. 15, 25).
11. Claims 1, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Moon (US 2002/0030975).
12. Regarding claim 1, Moon shows all aspects of the instant invention including a multilayer circuit comprising a flexible sheet **131** of insulating material having two sides, wherein:
- Conductive sections are attached to both of the two sides **137a/137b** (see, e.g., figs. 1 and 2)
  - The flexible sheet is folded along folding lines (see, e.g., fig. 3C)
  - The folding lines divide the sheet into consecutive segments (see, e.g., figs. 1 and 2)

- Folding the sheet forms a multilayer structure having conductor layers, formed by the conductive sections, and insulator layers, formed by the flexible sheet, stacked above each other (see, e.g., fig. 3C)
  - The conductive sections are interconnected to form an electric circuit (see, e.g., fig. 4)
  - At least two consecutive sections of the electric circuit that must be insulated from each other are disposed on different sides of the sheet (see, e.g., fig. 3A)
13. Regarding claim 21, Moon shows the conductive sections comprising metallic conductors **140/143** (see, e.g., fig. 3A).
14. Regarding claim 22, Moon shows the conductive sections comprising conductive elements **110/120** (see, e.g., fig. 3A).

### ***Response to Arguments***

15. The applicant argues:

Although semiconductor chips might be conductive to some extent, Kim does not teach “conductive sections” that form “conductive layers”.

The examiner responds:

Kim shows these features of the claimed invention. See, e.g., fig. 24, where Kim clearly shows conductive sections forming conductive layers **914**.

16. The applicant argues:

Kim does not teach interconnecting the conductive sections to provide an electric circuit, as claimed.

The examiner responds:

Kim shows these features of the claimed invention. See, e.g., col.4/ll.20-30, where Kim clearly teaches that the conductive sections are interconnected to provide an electric circuit.

***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

19. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be faxed to Art Unit 2814 via the Art Unit 2814 Fax Center. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(571) 273-8300**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Marcos D. Pizarro-Crespo** at **(571) 272-1716** and between the hours of 10:00 AM to 8:30 PM (Eastern Standard Time) Monday through Thursday or by e-mail via [Marcos.Pizarro@uspto.gov](mailto:Marcos.Pizarro@uspto.gov). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy, can be reached on (571) 272-1705.

21. Any inquiry of a general nature or relating to the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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22. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/666-733	3/21/2006
Other Documentation:	
Electronic Database(s): EAST (USPAT, EPO, JPO)	3/21/2006



Marcos D. Pizarro-Crespo

Patent Examiner

Art Unit 2814

571-272-1716

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MDP/mdp  
March 22, 2006